

Abstract of the Disclosure:

This invention is a method of producing a reflective mask comprising a substrate, a reflective multilayer film formed on the substrate to reflect exposure light, and at least one layer formed on the reflective multilayer film to define a nonreflecting region for the exposure light. The method comprises the steps of: (a) patterning a layer formed on and adjacent to a topmost layer of the reflective multilayer film; and (b) removing a reaction product produced following patterning in the step (a) and deposited on an exposed surface of the reflective multilayer film which is exposed as a result of patterning in the step (a). The step (a) may be performed by the use of an oxygen-containing plasma process.